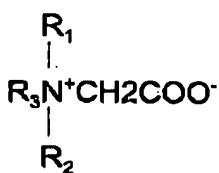


THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A fluid for fracturing a subterranean formation comprising:

(i) a surfactant having the general formula

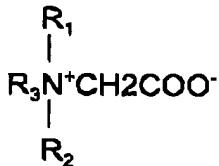


where R_1 - R_2 are each an aliphatic group of C1-C4, branched or straight chained, saturated or unsaturated, R_3 is a group of C12-C22, branched, straight chained or cyclic, saturated or unsaturated;

(ii) a water soluble or dispersible anionic organic or inorganic salt;
(iii) an acid; and
(iv) a low molecular weight organic solvent.

2. A method of fracturing a subterranean formation comprising the steps of: providing a visco-elastic surfactant based hydraulic fracturing fluid comprising:

(i) a surfactant having the general formula



where R_1 - R_2 are each an aliphatic group of C1-C4, branched or straight chained, saturated or unsaturated, R_3 is a group of C12-C22, branched, straight chained or cyclic, saturated or unsaturated;

(ii) a water soluble or dispersible anionic organic or inorganic salt;
(iii) an acid; and
(iv) a low molecular weight organic solvent, and;
pumping said fracturing fluid through a well bore and into a subterranean formation at a sufficient pressure to cause fracturing of said formation.

3. A fluid as claimed in claim 1, wherein the ratio of said salt to said surfactant is in the range of 1:4 to 1:2.
4. A fluid as claimed in claim 3, wherein said salt is selected from the group including potassium sulfonate, zinc sulfonate, magnesium sulfonate, xylene sulfonate, toluene sulfonate, naphthalene sulfonates, NaCl and Kcl.
5. A fluid as claimed in claim 3, wherein said acid is selected from the group including formic acid, citric acid, hydrochloric acid, acetic acid.
6. A fluid as claimed in claim 3, wherein said organic solvent is a low molecular weight alcohol.
7. A fluid as claimed in claim 6, wherein said surfactant is present in a quantity of about 0.1% (wt) to about 5.0% (wt).
8. A fluid as claimed in claim 7, in the form of a foam including about 52 to about 95% liquified gas selected from the group including CO₂, N₂, air and low molecular weight hydrocarbons.
9. A fluid as claimed in claim 8 containing 10-200 standard cubic metres of N₂ per cubic metre of fluid.
10. A fluid as claimed in claim 8, containing 10-200 standard cubic metres of gaseous CO₂ per cub metre of fluid or the liquid equivalent.
11. A method as claimed in claim 2, wherein the ratio of said salt to said surfactant is in the range of 1:4 to 1:2.
12. A method as claimed in claim 11, wherein said salt is selected from the group including potassium sulfonate, zinc sulfonate, magnesium sulfonate, xylene sulfonate, toluene sulfonate, naphthalene sulfonates, NaCl and Kcl.

13. A method as claimed in claim 11, wherein said acid is selected from the group including formic acid, citric acid, hydrochloric acid, acetic acid.

14. A method as claimed in claim 11, wherein said organic solvent is a low molecular weight alcohol.

15. A method as claimed in claim 14, wherein said surfactant is present in a quantity of about 0.1% (wt) to about 5.0% (wt).

16. A method as claimed in claim 15, in the form of a foam including about 52 to about 95% liquified gas selected from the group including CO_2 , N_2 , air and low molecular weight hydrocarbons.

17. A method as claimed in claim 16 containing 10-200 standard cubic metres of N_2 per cubic metre of fluid.

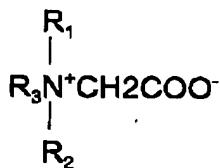
18. A method as claimed in claim 16, containing 10-200 standard cubic metres of gaseous CO_2 per cubic metre of fluid or the liquid equivalent.

19. A method as claimed in claim 2, including the further step of lowering the viscosity of said fluid by raising the pH thereof.

20. A method as claimed in claim 19, wherein said pH is raised by the addition of an alkaline compound selected from the group including carbonates, oxides, and amines.

21. A fluid for fracturing a subterranean formation comprising:

(i) a surfactant having the general formula



where R_1 - R_2 are each an aliphatic group of C1-C4, branched or straight chained, saturated or unsaturated; R_3 is a group of C12-C22, branched, straight chained or cyclic, saturated or unsaturated;

- (ii) a water soluble or dispersible anionic organic or inorganic salt; and
- (iii) an acid.

22. A fluid as claimed in claim 21, wherein said acid is a strong acid selected from the group including hydrochloric, hydrofluoric, formic, sulfamic, acetic, or mixtures thereof.

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